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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,120	05/31/2000	Michael C. Chen	KTI-003	2226

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EXAMINER	
BOAKYE, ALEXANDER O	

ART UNIT	PAPER NUMBER
2667	11

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/584,120	CHEN MICHAEL	
	Examiner	Art Unit	
	Alexander Boakye	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 19-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-15,39 and 40* is/are allowed.

6)☒ Claim(s) *16,17,19,20,23,25,26 and 28* is/are rejected.

7)☒ Claim(s) *21,22,24,27,29-38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 102.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16, 17, 19, 20 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Schuster et al. (US Patent # 6,175,871).

Regarding claim 16, Schuster discloses a system (Fig. 2) for storing at least one frame of an input signal for an amount of time before transmitting the at least one frame , the system comprising: a buffer for storing a frame of an input signal (column 9, lines 36-38), the buffer having a depth which is adjustable (column 8, lines 46-48 ; see Fig. 6); a buffer detector unit (327, Fig. 6) and specifies an amount of time is stored in the buffer before being played (column 11, lines 49-55); a buffer depth adjuster for altering the depth of the buffer (column 15, lines 48-50; see 331 Fig. 6) responsive to the buffer detector unit determining a predetermined amount of frames are not stored in the buffer.

Regarding claim 17, Schuster discloses a method for increasing a depth of a multimedia buffer (column 10., lines 22-23) the method comprising the steps of: receiving a frame of an input signal (column 7, lines 27-29) at an arrival-time, the frame

having a time stamp indicating a playback time (column 11, lines 49-55; playback time is inherently in the time stamp since time stamp is use to indicate the relative playout time of received packets at user display unit when a user views video programs). Furthermore Schuster teaches determining an amount of time the frame arrived late if the arrived-time is greater than the playback-time (column 10, lines 22-35); and whether the frame arrived late, the frame arriving late if the arrival time is greater than the playback time (column 10, lines 22-32); altering the depth of the multimedia buffer system if the frame arrived late (column 10, lines 26-35; see Fig. 6).

Regarding claim 19, Schuster discloses that depth of the multimedia buffer system is altered to increase by a maximum amount of time which a frame within a set arrived late (column 10, lines 22-32).

Regarding claim 20, Schuster discloses that the length of the set is variable (column 14, lines 26-35).

Regarding claim 28, Schuster discloses a computer program for altering a depth of a buffer, the computer program operable to: receive a frame of an input signal (column 7, lines 22-23) at an arrival-time, the frame having a timestamp indicating a playback-time (column 11, lines 49-55); determine whether the frame arrived on schedule(column 7, lines 65-66 ; see Fig. 11) the frame arriving on schedule if the arrival-time matches the playback-time (column 11, lines 49-55) ; determining an amount of time between the arrival-time and the playback-time if the frame did not arrive on schedule; and altering the depth of the buffer if the frame did not arrive on schedule(column 10, lines 26-35; see Fig. 6).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 23, 25, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. (US Patent # 6,175,871) in view of Lyons et al. (US Patent # 6,282,196).

Regarding claim 23, Schuster discloses a method comprising the steps of: receiving a frame of an input signal (column 7, lines 22-23) at an arrival time, the frame having a timestamp indicating a playback time (column 11, lines 49-55); altering the depth of the multimedia buffer system (column 10, lines 26-35; see Fig. 6). Schuster does not disclose determining whether the frame arrived early, the frame arriving early if the arrival time is less than the playback time; determining an amount of time the frame arrived early if the arrival-time is less than the play-out time. However, Lyons discloses determining whether the frame arrived early, the frame arriving early if the arrival time is less than the playback time (column 7, lines 65-66 ; see Figs. 6 and 7); determining an amount of time the frame arrived early if the arrival-time is less than the playback-time (column 7, lines 65-66). One of ordinary skill would have been motivated to incorporate an amount of time the frame arrived early if the arrival time is less than the playback time such as the one taught by Lyons into the communication network of Schuster in order to afford proper loading. Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to incorporate an amount of time the frame arrived early if the arrival time is less than the playback time such as the one taught by Lyons into the communication network of Schuster with the motivation being that it provides improvement of signal quality, thus enhancing performance.

Regarding claim 25, Schuster discloses determining an amount of frames stored in the multimedia buffer system (column 15, lines 41-48).

Regarding claim 26, Schuster discloses that the depth of the multimedia buffer system is decreased by an amount dependent on the amount of frames stored in the multimedia buffer (column 10, lines 37-44).

Allowable Subject Matter

3. Claims 21, 22, 24, 27 and 29-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-15, 39 and 40 are allowable.

The following is a statement of reasons for the indication of allowable subject matter: As to claims 1-15, the prior art of record does not teach a comparison module for comparing the arrival-time with the playback-time for determining whether the frame arrived on schedule, the comparison module operable to determine an amount of time between the arrival-time and the playback-time if the frame did not arrive on schedule; and a buffer depth adjuster for altering the depth of the buffer responsive to the comparison module determining the frame did not arrive on schedule, wherein the depth

of the buffer is altered based on the amount of time the frame did not arrive on schedule.

As to claim 39, the prior art of record does not teach means for maintaining a late count representing a number of frames arriving late; means for determining whether the late-counter exceeds a predetermined value; and means for altering the depth of the buffer if the frame arrived late and the late-counter exceeds the predetermined value. As to claim 40, the prior art of record does not teach means for maintaining an early count representing the number of frames arriving early; means for determining whether the early count exceeds a predetermined value; and means for altering the depth of the buffer if the frame arrived early and the early count exceeds the predetermined value..

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Pat. # 6,157,653.

Response to Arguments

4. Applicant's arguments filed 2/18/2004 have been fully considered but they are not persuasive.

A At page 17, in claims 16-20, applicant argued that Schuster does not teach a buffer "having a depth which is adjustable and specifies an amount of time the frame is stored in the buffer before being played as recited by amended claim 16.

B In response, the examiner maintains that Schuster disclose a buffer "having a depth which is adjustable and specifies an amount of time the frame is stored in the buffer before being played (column 8, lines 46-48 ; column 11, lines 8-12; see 331 Fig. 6).

C) At pages 17 and 18, in claim 17, applicant argued that Schuster failed to address "determining an amount of time the frame arrived late if the arrival-time is greater than the playback-time".

D) In response, the examiner maintains that Schuster teaches "determining an amount of time the frame arrived late if the arrival-time is greater than the playback – time (column 10, lines 22-35).

E) At page 22, in claims 23 and 25-26, applicant argued that Lyons does not disclose "determining an amount of time the frame arrived early if the arrival-time is less than the playback-time"

F) In response, the examiner maintains that Lyons discloses "determining an amount of time the frame arrived early if the arrival-time is less than the playback-time (column 7, lines 65-66; see Figs. 6 and 7). Thus, one of ordinary skill in the art would have been motivated to incorporate an amount of time the frame arrived early if the arrival time is less than the playback time into the communication network of Schuster in order to afford proper loading.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (703) 308-9554. The examiner can normally be reached on M-F from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305-4378. The fax number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-4750.

Alexander Boakye

Patent Examiner

AB

5/15/04

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5/17/04